Department of the Army Pamphlet 621-94

**EDUCATION** 

THE US ARMY
SIGNAL SCHOOL
APPRENTICESHIP
PROGRAM FOR
THE TRADE OF
RADIO
OPERATOR

Headquarters
Department of the Army
Washington, DC
1 August 1982

**UNCLASSIFIED** 

## **SUMMARY of CHANGE**

DA PAM 621-94
THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF RADIO OPERATOR

This change 1-

- o Corrects the hours required to perform periodic servicing and functional checks of Radio and Associated Power Equipment.
- o Corrects Appendix B(formerly Appendix A), page A-1, paragraph C, under hours, change 2220 to read 2200.

#### **EDUCATION**

### THE US ARMY SIGNAL SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF RADIO OPERATOR

By Order of the Secretary of the Army:

E. C. MEYER General, United States Army Chief of Staff

#### Official:

ROBERT M. JOYCE Brigadier General, United States Army The Adjutant General

**History.** This publication was originally printed on 15 July 1981. It was authenticated by Robert M. Joyce, Brigadier General, United States Army Adjutant General, and E. C. Meyer, General, United States Army Chief of Staff. Change 1 to this regulation was

printed on 1 August 1982 and was authenticated by Robert M. Joyce, Brigadier General, United States Army Adjutant General, and E. C. Meyer, General, United States Army Chief of Staff. This electronic edition publishes the basic 1981 edition and incorporates Change 1.

Summary. Not applicable.

**Applicability.** This pamphlet applies to all elements of the active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

Proponent and exception authority. The proponent agency of this pamphlet is The Adjutant General's Office.

**Interim changes.** Interim changes are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

**Suggested Improvements.** Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA–E, Fort Gordon, GA 30905.

**Distribution.** To be distributed in accordance with DA Form 12–9A requirements for DA Pamphlets, Education:

Active Army:—B ARNG:—None USAR:—None

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<sup>\*</sup>This pamphlet supersedes DA Pam 621-94, 1 May 1979.

**RESERVED** 

#### 1. Purpose.

The purpose of this pamphlet is to announce the US Army Signal School Apprenticeship Program for the Trade of Radio Operator (DOT Code 193.262–026).

#### 2. Applicability.

This pamphlet applies to all elements of the Active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

#### 3. General.

Policies and procedures for participation in the program are contained in AR 621–5. This pamphlet is designed to be used in conjunction with that regulation.

#### 4. Apprenticeship Program Number and Occupational Skill Code.

- a. The following apprenticeship program number and occupational skill code are used to identify the US Army Signal School Apprenticeship Program for the Trade of Radio Operator.
  - (1) Apprenticeship Program Number: 99904.
  - (2) Occupational Skill Code: 16.
- b. The apprenticeship program number and occupational skill code must be entered on DA Form 4409–R (Apprenticeship Application) to identify the program for which the soldier is making application.

#### 5. Eligibility for Participation in the Program.

Soldiers holding as primary or secondary one of the MOS indicated below serving in that MOS may participate in the program.

- a. MOS 05B: Radio Operator.
- b. MOS 05C: Radio Teletypewriter Operator.
- c. MOS 31M: Multichannel Communications Equipment Operator.

#### 6. The Radio Operator Apprenticeship Program.

This is a 8,000-hour program which leads to certification as journeyworker in the trade of Radio Operator. Participation in the program is voluntary, and no membership in labor unions or professional associations is required. The work process schedule and schedule of related instruction for the trade are cited in appendixes B and C. The purpose of the work process schedule and the schedule of related instruction are as indicated below:

- a. The work process schedule reflects categories of work experience required by soldier-apprentices to qualify as journeyworker and hours of work experience required in each category.
- b. The schedule of related instruction identifies courses which may be taken by soldier-apprentices to satisfy the 576 hours of elated instruction required for completion of the program.

#### 7. Enrollment in the Program.

Soldiers may enroll in the program by contacting their installation education services officers (ESOs) who will explain requirements of the program and assist in the preparation of the apprenticeship qualification form (DA Form 4409–R).

#### 8. Apprenticeship Log Forms.

Apprenticeship log forms and instructions on use of forms will be issued to soldiers by installation ESOs at the time of registration in the program. Log instruction sheets will be maintained by soldiers in a three–ring binder. Soldier–apprentices will be required to annotate their work experience on log sheets on a daily basis. The standard for the amount of work experience logged will be 132 hours per month. Hours logged above this standard amount must be justified in the remarks section of the daily work experience record and attested to by the signature and rank of the shop craft supervisor or an individual holding a comparable position. Log entries must be verified by the soldier–apprentice's immediate supervisor on a weekly basis.

#### 9. Credit for Previous Experience.

- a. Newly enrolled soldier-apprentices who have partially completed an approved Federal or State registered civilian apprenticeship in the trade of Instrument Repairer (electronic) or a related trade will, upon presentation of documentation, be awarded credit for all experience related to categories of work contained in the work process schedule cited at appendix B.
- b. Up to 4,000 hours of credit for previous military work experience may be awarded upon presentation of authenticated documentation of satisfactory performance. Such experience must be directly related to the occupation in which the apprenticeship is being performed. Statements from previous supervisors or other such documentation which

certify category of work, number of hours by category, and quality of performance will be submitted by soldier-apprentices to their installation ESOs for consideration. ESOs will forward these documents to the Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA-E, Fort Gordon, GA 30905, for final determination.

#### 10. Related Instruction Credit for Previous Military and Civilian Education.

Credit for previous military and civilian education may be awarded to satisfy related instruction requirements by presenting certificates of course completion or other such documentation from official military records or other sources. The installation ESO will determine the amount of credit to be awarded. The ESO will consult sponsor Service schools, as required, in order to determine the appropriate amount of credit for each course not listed in appendix C of this pamphlet.

#### 11. Completion of the Program.

Upon successful completion of the program, a Certificate of Completion of Apprenticeship will be awarded by the US Department of labor. While the award of a Certificate of Completion of Apprenticeship will not guarantee a job, it will certify that journeyworker status has been attained, and should enable completers of the program to be more competitive with civilians in the trade.

#### 12. Partial Completers.

Soldiers leaving the Service prior to the completion of the program will receive documented credit for that portion of the program which they did complete. This documentation may be presented for satisfaction of requirements of civilian apprenticeship programs in the trade of Instrument Repairer (Electronic) or a related trade. See appendix D.

## Appendix A References

#### Section I

#### **Required Publications**

This section contains no entries.

#### Section II

#### **Related Publications**

This section contains no entries.

#### Section III

#### **Prescribed Forms**

This section contains no entries.

#### Section IV

#### **Referenced Forms**

This section contains no entries.

# Appendix B Work Process Schedule for the Trade of Radio Operator (Dot Code 193.262-026)

#### B-1. Work Process Schedule for the Trade of Radio Operator

Paragraph not used.

|    |   | Hours |
|----|---|-------|
| A. | Develop Skills in Communication Procedures and Message Handling Techniques  | 300   |
| B. | Install Radio Set and Associated Power Equipment  | 2,500 |
| C. | Perform Periodic Servicing and Functional Checks on Radio and Associated Power Equipment  | 2,200 |
| D. | Operate Radio Equipment  1. Voice, teletypewriter, and International Morse Code modes.  2. Tuning.  3. Netting.  4. Operating and stopping procedures for radios and generators.  5. Operate switchboards and radio-teletypewriter sets utilizing correct procedures.  6. Operate radio/wire integration systems.  7. Operate in secure voice and teletypewriter modes.  8. Operate equipment under unusual conditions.  9. Employ anti-jamming measures to counteract jamming. | 3,000 |
|    | TOTAL   | 8,000 |

#### B-2. Title not used.

Paragraph not used.

#### Appendix C Schedule of Related Instruction for the Trade of Radio Operator (Dot Code 193.262-026)

#### C-1. Schedule of Related Instruction for the Trade of Radio Operator

A total of 576 hours of related instruction is required to complete this program. Completion of any one or a combination of the below listed courses which equals 576 hours of related instruction or more may be taken to satisfy this requirement. Credit for courses not listed below may be awarded upon presentation of authenticated documentation of satisfactory completion. A synopsis of the course must be submitted with documentation. Documentation and synopsis for courses not listed below will be forwarded by ESOs to the Commander for final determination. Commander, US Army Signal Center and Fort Gordon, ATTN: ATZHPA–E, Fort Gordon, GA 30905.

| Table C-1 Schedule of Related Instruction for the Trade of Radio Operator |                    |  |                |            |              |              |
|---|--------------------|--|----------------|------------|--------------|--------------|
| Cou   | rse Number         | Course Title   | School         | Resident I | Non-resident | Credit Hours |
| A.  | 201-05B10          | Radio Operator (After 1 May 79)  | USASC          | Χ          |              | 259          |
| B.  | 201-05B20          | Radio Operator (Prior 1 May 79)  | USASC          | Χ          |              | 319          |
| C.  | 201-05C10          | Radio Teletypewriter Operator (After 1 May 79)   | USASC          | X          |              | 410          |
| D.  | 201-05C20          | Radio Teletypewriter Operator (Prior 1 May 79)   | USASC          | X          |              | 546          |
|   | 201–05F20          | Radio Teletypewriter Operator(Non–Morse)(Prior 1976)   | USASC          | Х          |              | 359          |
| F.  | 201–05F20          | Radio Teletypewriter Operator(Discontinued After 1976)   | USASC          | Х          |              | 359          |
| G.  | 202-31M10          | Multichannel Communications Equipment<br>Operator(After 1 May 1979)                            | USASC          | Х          |              | 371          |
| H.  | 202-31M20          | Multichannel Communications Equipment<br>Operator(Prior 1 May 1979)                            | USASC          | Х          |              | 350          |
| I.  | 5–1                | Radio Operator Course(05B10)   | USASC          |            | Χ            | 58           |
| J.  | 5–2                | Radio Teletypewriter Operator Course(05C10)  | USASC          |            | Χ            | 81           |
| -   | 5–8                | Multichannel Communications Equipment Operator   | USASC          |            | X            | 254          |
|   | 1 Phase I          | Multichannel Communications Equipment Operator   | USASC          |            | X            | 49           |
|   | 2 Phase IA         | Multichannel Communications Equipment Operator   | USASC          |            | X            | 49           |
|   | 3 Phase IB         | Multichannel Communications Equipment Operator   | USASC          |            | X            | 72           |
|   | 4 Phase IC         | Multichannel Communications Equipment Operator   | USASC          |            | X            | 84           |
|   | SSO 010            | Introduction to Electronic Warfare   | USASC          |            | X            | 2            |
|   | SSO 014            | Tactical Radio systems   | USASC          |            | X            | 11           |
|   | SSO 018            | Communications Power Equipment   | USASC          |            | X            | 5            |
|   | SS9 018            | Communications Power Equipment (SOJT)  | USASC          |            | X            | 6            |
|   | SSO 450            | Basic Communications Principles  | USASC          |            | X            | 5            |
|   |                    | ·  |                |            | X            |              |
|   | SSO 454            | Tactical Communications Center Operations  | USASC          |            |              | 10           |
|   | SSO 456            | Principles of Communications Security (COMSEC)   | USASC          |            | X            | 5            |
|   | SSO 451<br>SSO 470 | Manual Teletypewriter Procedures and Operations Automated Communications Electronics Operating | USASC<br>USASC |            | X<br>X       | 8            |
|   |                    | Instructions (CEOI)  |                |            |              | _            |
|   | SSO 650            | Safety and Preventive Maintenance  | USASC          |            | X            | 3            |
|   | SSO 652            | Operating Through Radio Jamming and Interception   | USASC          |            | X            | 2            |
|   | SSO 730            | Radio Set AN/GRC-106 Operation   | USASC          |            | X            | 4            |
|   | SSO 773            | Radio Teletypewriter Sets AN/GRC-142/122   | USASC          |            | X            | 4            |
| Y.  | SSO 734            | Tactical FM Radio Sets   | USASC          |            | Χ            | 5            |
| Z.  | SS9 735            | Operation of Radio Sets AN?PRC-77 (SOJT)   | USASC          |            | Χ            | 6            |
| AA.   | SS9 740            | Radio Set AN/GRC-106   | USASC          |            | Χ            | 4            |
| BB.   | SSO 745            | Interoperability of Tactical Single–Channel FM and AM Communications Equipment                 | USASC          |            | Χ            | 6            |
| CC.   | SS9 926            | Basic International Morse Code (TEC)   | USASC          |            | Χ            | 45           |
| DD.   | SS9 927            | Intermediate International Morse Code (TEC)  | USASC          |            | Χ            | 30           |
| EE.   | SS9 928            | Advanced International Morse Code (TEC)  | USASC          |            | Χ            | 35           |
|   | SSO 308            | Introduction to Electricity  | USASC          |            | X            | 6            |
|   | .SSO 320           | Communications Fundamentals  | USASC          |            | X            | 5            |
|   | SSO 098            | Metric System of Linear Measurement  | USASC          |            | X            | 1            |
|   | SSO 352            | Multiplexing   | USASC          |            | X            | 5            |
|   | SSO 843            | PCM Multichannel Communications System   | USASC          |            | X            | 10           |
|   | SS9 843            | PCM Multichannel Communications System   | USASC          |            | X            | 7            |
|   | SSO 016            | Multichannel Radio Systems   | USASC          |            | X            | 10           |
|   | .SSO 732           | •  | USASC          |            | x            | 10           |
|   |                    | Radio Set AN/GRC 103(V)  |                |            |              |              |
|   | SS9 732            | Radio Set AN/GRC–103(V)(SOJT)  | USASC          |            | X            | 10           |
|   | SSO 842            | PCM Multiplexing Equipment   | USASC          |            | X            | 7            |
|   | SS9 842            | PCM Multiplexing Equipment   | USASC          |            | X            | 10           |
|   | SSO 741<br>SS9 741 | Radio Set AN/GRC-50 Operation<br>Radio Set AN/GRC-50 (SOJT)                                    | USASC<br>USASC |            | X<br>X       | 5<br>8       |

Table C-1
Schedule of Related Instruction for the Trade of Radio Operator—Continued

| Course Number | Course Title  | School | Resident Non-resident | Credit Hours |
|---------------|---|--------|-----------------------|--------------|
| SS. SSO 086   | Tactical TDM-PCM Multichannel Cable Communications System | USASC  | Х                     | 10           |
| TT. SSO 350   | Introduction to Radio Relay                               | USASC  | X                     | 10           |
| UU.SSO 085    | Tactical Multichannel Radio Communications                | USASC  | X                     | 10           |
| VV. SSO 469   | Power for Tactical Communications Equipment               | USASC  | X                     | 12           |
| WWSSO 739     | Radio Set AN/TRC-24 Operation                             | USASC  | X                     | 7            |
| XX. SS9 739   | Radio Set AN/TRC-24 Operation (SOJT)                      | USASC  | X                     | 10           |
| YY. SSO 495   | Installation and Operation of AN/MRC-69                   | USASC  | X                     | 20           |
| ZZ. SS9 495   | Installation and Operation of AN/MRC-69                   | USASC  | X                     | 31           |
| AAASSO 006    | Multichannel Radio Fundamentals                           | USASC  | X                     | 8            |

#### C-2. Title not used.

Paragraph not used.

#### Appendix D Example of a Partial Completion Letter

#### D-1. Example of a Partial Completion Letter

Paragraph not used.

| (Enter Office Symbol)  |                    |          |            |               | (Enter Date)                           |  |  |
|--|--------------------|----------|------------|---------------|--|--|--|
| (Enter Date Symbol)  |                    |          |            |               |  |  |  |
| TO WHOM IT MAY CONCERN:  |                    |          |            |               |  |  |  |
|  |                    |          |            |               |  |  |  |
| This is to certify that  |                    | Name)    |            | wa            | s enrolled in the Army                 |  |  |
| Apprenticeship Program for   | (                  | (Name)   |            |               |  |  |  |
| Apprendeship Flogram for   |                    | (Name of | Occupation | al Skill Area | <u> </u>                               |  |  |
|  | During this period |          | to _       |               | During that period                     |  |  |
| (Registration Number)  | •                  | (Date)   |            | (Date)        | 5 1                                    |  |  |
| he successfully completed the  | e following hours: |          |            |               |  |  |  |
|  |                    |          |            |               |  |  |  |
| Work Process   |                    |          |            |               | Hours                                  |  |  |
| Α  |                    |          |            |               |  |  |  |
| В  |                    |          |            |               |  |  |  |
|  |                    |          |            |               |  |  |  |
| <del></del>  |                    |          |            |               | ************************************** |  |  |
| <del></del>  |                    |          |            |               |  |  |  |
| Army Apprentice Programs are registered with the US Department of Labor and the fact that this individual did participate can be verified with the Bureau of Apprenticeship and Training, Patrick Henry Building, Washington, DC 20213, or by contacting Headquarters, TRADOC, ATTN: ATPL-AGE, Fort Monroe, VA, 23651. |                    |          |            |               |  |  |  |
|  |                    | :        | Sincerely, |               |  |  |  |
|  |                    | ]        | ESO's SIG  | NATURE BI     | LOCK                                   |  |  |
| Figure D-1. Example of a Partial Completion Letter   |                    |          |            |               |  |  |  |

#### D-2. Title not used.

Paragraph not used.

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